

REMARKS

In the Office Action mailed April 13, 2006, the Examiner objected to the drawings and rejected claims 1-18. An objection to claim 3 was also lodged for incomplete phrasing of a limitation in the claim. As to the grounds for claim rejection, claims 1, 3, 10, 12-14, and 17-18 were rejected under 35 U.S.C. § 102(b) as being anticipated by Allen et al. (U.S. Patent No. 5,406,315, hereinafter "Allen"). Claims 2, 4-6, and 8-9 were rejected under 35 U.S.C. § 103(a) as being obvious over Allen in view of Matsumoto et al. (U.S. Patent No. 6,969,136, hereinafter "Matsumoto"). Claim 7 was rejected under 35 U.S.C. 103(a) as being obvious over Allen in view of Matsumoto and further in view of Byers et al. (U.S. Published Application 2003/0043231, hereinafter "Byers"). Claims 11 and 15 were rejected under 35 U.S.C. § 103(a) as being obvious over Allen in view of Riley (U.S. Patent No. 5,146,785, hereinafter "Riley"). Claim 16 was rejected under 35 U.S.C. 103(a) over Allen in view of Byers.

Drawing Objections

The specification has been amended to include the reference numerals 180 and 216. FIG. 1 has been amended to remove the reference numeral 190 and a replacement drawing sheet has been submitted with this response. Applicants submit that all drawings objections have been addressed.

Claim rejections

Claims 1, 3, 10, 12-14, and 17-18

Claims 1, 3, 10, 12-14, and 17-18 were rejected as being anticipated by Allen. The amendments to the claims presented above distinguish Applicants'

container and system over the disclosure of Allen. With regard to claim 1, Allen does not disclose an electronic storage device that is coupled to a container bus for the receipt of printer operation information from a printer controller or electrical contacts for coupling the printer controller to the container bus for the transmission of the information to be stored. Additionally, none of the references of record, either alone or in combination, teach or suggest these limitations. For at least these reasons, claim 1 is patentable.

Claim 3 likewise requires an electronic storage device that is located within a container housing for the storage of printer operation information transferred to the storage device by a printer controller external to the ink supply container. Additionally, claim 3 includes a limitation that the container have electrical contacts for coupling the electronic storage device to the external printer controller for the receipt of the printer operation information from the external printer controller. None of the references of record, either alone or in combination, teach or suggest these limitations. For at least these reasons, claim 3 is also patentable.

Claim 10 depends from claim 1 and is patentable for the reasons set forth with respect to that claim. Moreover, Allen does not disclose a fluid outlet valve through which liquid ink is supplied to a printhead from a container having a container bus and electrical contacts for coupling an electronic storage device and a printer controller to store printer operation information. None of the other references of record, either alone or in combination, teach or suggest the

inclusion of a fluid outlet valve in such a container. For at least these reasons, claim 10 is patentable.

Claim 12 now depends from claim 11 and is patentable for at least the reasons discussed with regard to that claim. Moreover, claim 12 requires the supply container to include a rheostat coupled to a spring-biased ram. None of the references of record, either alone or in combination, teach or suggest this structure. Therefore, claim 12 is also patentable.

Claim 13 now depends from claim 12 and is patentable for at least the reasons discussed with regard to that claim. Furthermore, claim 13 requires the outlet port of the supply container to include a filter. None of the references of record, either alone or in combination, teach or suggest this structure in an ink supply container required by the claims. Therefore, claim 13 is also patentable.

Claim 14 depends from claim 3 and is patentable for at least the reasons discussed with regard to that claim. Moreover, claim 14 requires the system of claim 3 to include a spring-biased ram for urging a solid ink block stored within the container housing to a heater so that the heater melts a portion of the ink block. None of the references of record, either alone or in combination, teach or suggest this structure. Therefore, claim 14 is also patentable.

Claim 17 now depends indirectly from claim 14 and is patentable for at least the reasons discussed with regard to that claim. Furthermore, claim 17 requires a filter for filtering liquid ink transferred to a printhead through a outlet port. None of the references of record, either alone or in combination, teach or

suggest the use of a filter in such a container. Therefore, claim 17 is also patentable.

Claim 18 depends from claim 17 and is patentable for at least the reasons discussed with regard to that claim. Additionally, claim 18 requires the container to have a replaceable top for providing access to the container for replacement of the solid ink block. None of the references of record, either alone or in combination, teach or suggest this structure in such a container. Therefore, claim 18 is also patentable.

Claims 2, 4-6, and 8-9

Claim 2 has been amended to set forth a method for storing and melting solid ink for a solid ink printer. The method includes receiving printer operation information from a printer controller that is external to the ink container housing and storing that information in an electronic storage device that is within the housing. The combination of Allen and Matsumoto does not teach or suggest this method of storing and melting solid ink for a printer. The remaining references of record also fail to teach or suggest these aspects of the claimed method. Therefore, claim 2 is patentable over the references of record.

Claim 4 depends from claim 2 and is patentable for the reasons set forth with respect to that claim. Claim 4 also requires the method to include removal of the housing from the printhead to which it is coupled and downloading of printer operation information from the electronic storage device within the container. The combination of Allen and Matsumoto does not teach or suggest

this aspect of downloading printer operation information from a solid ink container. The remaining references of record also fail to teach or suggest these aspects of the claimed method. Therefore, claim 4 is patentable over the references of record.

Claim 5 depends from claim 2 and is patentable for the reasons discussed with regard to that claim. Claim 5 also requires that the method automatically detect a low level of ink, generate a low ink level signal, and transmit that signal over a container bus to the printer controller. The combination of Allen and Matsumoto does not teach or suggest these method components. The remaining references of record also fail to teach or suggest these aspects of the claimed method. Therefore, claim 5 is patentable over the references of record.

Claim 6 depends from claim 2 and is patentable for the reasons discussed with regard to that claim. Claim 6 also requires that the method generate a user perceivable indication that a ink level in a solid ink supply container has reached a low level. The combination of Allen and Matsumoto does not teach or suggest these method components with such a container. The remaining references of record also fail to teach or suggest these aspects of the claimed method. Therefore, claim 6 is patentable over the references of record.

Claim 8 now depends from claim 7 and is patentable for at least the reasons discussed with regard to that claim. Additionally, claim 8 requires the application of pressure to a solid ink block with a spring-biased ram to move a portion of an ink block into contact with a heater in the container. The combination of Allen and Matsumoto does not teach or suggest the application of

pressure to a solid block within a housing. The remaining references of record also fail to teach or suggest these aspects of the claimed method. Therefore, claim 8 is patentable over the references of record.

Claim 9 depends from claim 8 and is at least patentable for the reasons given for the allowance of that claim. Moreover, claim 9 includes the detection of a low ink level with a rheostat that is coupled to the spring-biased ram. The combination of Allen and Matsumoto does not teach or suggest this type of low level ink detection within a solid ink supply container. The remaining references of record also fail to teach or suggest these aspects of the claimed method. Therefore, claim 9 is patentable over the references of record.

Claim 7

Claim 7 depends from claim 2 and is patentable for the reasons set forth with regard to that claim. Furthermore, claim 7 requires that the method include detection of low ink level and the automatic switching from one solid ink supply container in a plurality of solid ink supply containers to another one of the solid ink supply containers in the plurality. The combination of Allen, Matsumoto, and Byers does not teach or suggest this type of solid ink supply switching with a plurality of solid ink supply containers. The remaining references of record also fail to teach or suggest these aspects of the claimed method. Therefore, claim 7 is patentable over the references of record.

Claims 11 and 15

Claim 11 depends from claim 1 and is patentable for at least the reasons discussed with regard to that claim. Moreover, claim 11 requires the ink container to include a spring-biased ram for applying pressure to the solid ink block. The combination of Allen and Riley does not teach or suggest this structure. The Examiner has also failed to identify a competent reason for one of ordinary skill in the art combining the teachings of the fuel level detection system of Riley with the ink supply system of Allen. The absence of motivation to combine these references is especially apparent where Riley does not couple his rheostat structure to a spring-biased ram to address the issue of moving of a solid ink block to a heater for melting. The remaining references do not overcome this deficiency and, for at least these reasons, claim 11 is patentable.

Claim 15 depends from 14 and is patentable for the reasons set forth above with respect to that claim. Claim 15 also requires that a rheostat be coupled to a spring-biased ram that moves a solid ink block towards a heater for melting. The combination of Allen and Riley does not teach or suggest this structure. The remaining references also fail to provide any such teaching or suggestion. Therefore, for at least these reasons, claim 15 is patentable. Also, as noted above with respect to claim 11, the Examiner has failed to identify a proper motivation for combining the fuel system rheostat of Riley with the solid ink container of Allen. Therefore, the references should not be combined and this ground of rejection should be withdrawn.

Claim 16

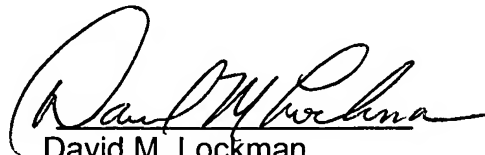
Claim 16 depends from claim 3 and is patentable for at least the reasons discussed with respect to that claim. Additionally, claim 16 requires that the method include detection of low ink level and the automatic switching from one solid ink supply container in a plurality of solid ink supply containers to another one of the solid ink supply containers in the plurality. The combination of Allen and Byers does not teach or suggest this type of solid ink supply switching with a plurality of solid ink supply containers. The remaining references of record also fail to teach or suggest these aspects of the claimed method. Therefore, claim 7 is patentable over the references of record.

Conclusion

For the reasons set forth above, all pending claims 1-18 have been amended and are patentable over all references of record. Reexamination and allowance of all pending claims are earnestly solicited.

Respectfully submitted,

MAGINOT, MOORE & BECK LLP

A handwritten signature in black ink, appearing to read "David M. Lockman", written over a horizontal line.

David M. Lockman
Attorney for Applicants
Registration No. 34,214

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Maginot, Moore & Beck LLP
Bank One Center/Tower
111 Monument Circle, Suite 3000
Indianapolis, Indiana 46204-5115
Phone: (317) 638-2922
Fax: (317) 638-2139